

Iowa Power Fund Board – Due Diligence Committee (DDC)
Meeting Minutes
April 23, 2008

Iowa Department of Economic Development, ICN Conference Room
200 E. Grand Ave.
Des Moines, Iowa

Call to Order:

Roya Stanley, Chair, called the meeting to order at 1:04 P.M.

Roll Call:

Member	Present	Absent
John Brighton	X	
Franklin Codel	X	
Ted Crosbie	Conf. call	
Vern Gebhart	Conf. call	
Patricia Higby	X	
Fred Hubbell	X	
William [Curt] Hunter	Conf. call	
Roya Stanley	X	

- Also in attendance Svec-Carstens (associate general counsel, Governor's Office), from the OEI Jennifer Wright, Michelle Bauer, and Brian Crowe (Recording Secretary).

Approval of Agenda:

Ms. Higby moved, Mr. Hubbell seconds that the agenda for this meeting is approved. The agenda was passed on voice vote.

Approval of Minutes:

Mr. Hubbell moved to approve the March 31st meeting minutes, Mr. Brighton seconded. The minutes were approved via voice vote.

Mr. Hubbell moved to approve the April 7th meeting minutes, Mr. Codel seconded. The minutes were approved via voice vote.

Chair's Remarks:

Chairperson Stanley no comments.

Full-Application Review

1064-Biobased Energy Conference-Presenter: Jill Eucken, Bioeconomy Institute

Presentation:

- Asking for \$12,500 for 6th conference which was started in 2002.
- 30 years to 6 billion gallons and new RFS requires 21 billion more gallons from cellulose which is currently non-existent.
- Many issues currently facing biofuels have been playing out in the media, some of the authors of those scientific articles will come to ISU for the conference.
- Many industry and government partners.
- Very well respected contributors representing various viewpoints on the future of biofuels.
- There will be 6 tracks and four sessions for the conference.
- This year will include a post conference workshop.

- Total project costs is just under \$400,000
- This project will help with knowledge transfer, and through public education.

Questions

- Q. Why was the request reduced? A. Because the Due Diligence committee requested less.
- Q. Does the conference want the money or the Power Fund Board's approval? A. Both.
- Q. How many will be in attendance? A. More than 800.
- Q. Are they requesting funds from the Energy Center? A. Yes, that track is being pursued.
- Q. A goal is to engage land grant institutions, is that the entire goal? A. It is apart of the Midwest Regional Governor's Coalition goals. But, they are not looking to be exclusive.
- Q. Are there any legal disclosures necessary for the full app? A. Did not think that this was applicable.

There is the recommendation that this proposal goes the full board:

Yes: Codel, Crosbie, Higby, Hubbell

Recusal: John Brighton

1007: Clean Gasification Platform for Renewable Power- Presenter Song Juang Kong

- Biomass needs to be gasified to reduce emissions.
- There are several Iowa companies involved in the project: Frontline energy and Hawkeye Renewables
- There are several technologies that need to be developed to allow the technology to work.
- Low fuel NOx burner and catalyst development needs to be developed to make the technology successful.
- This project would enhance Iowa's bioeconomy, enhance existing gasification system at BECON at the Iowa Energy Center
- Other companies will have access to the system developed at BECON.
- The facility will also be used to train future engineers working in the new bioeconomy.
- The system helps provide an alternative to natural gas.
- There are two potential IP developments; all private companies have agreed to share IP with ISU.
- Commercial burner will provide the baseline case. Newly designed burner will help to achieve continued improvements in biogasification.
- Clean gasification is necessary for next generation fuels
- This projects promotes the goals of energy independence
- Project request \$2,370,000 million, indirect cost rate is 8%, there are no tuition charges.

Questions

- Q. Will the results allow for large scale commercialization? A. No, but it will lay the groundwork for large scale production.
- Q. It seems that there might be two projects, the gasification, and the ethanol? A. The whole project works together, and is integrated. This is a thermo-chemical conversion to create ethanol.
- Q. Are the parties open to non-exclusive licenses to participating companies? A. Hawkeye is not looking for exclusivity but royalties from investment. Frontline agrees, and this could be a sub-licensing agreement.
- Q. Has Frontline had any other Power Fund applications? A. Yes, but not as primary.
- Q. What is the explosion capability of this project? A. There is a lower flammability than natural gas because there is lower energy content. The project will also adhere to all safety in engineering principals.
- Q. What kinds of biomass will be used? A. Discarded seed corn and other types as they become available.

- Q. Where would the project move forward with lesser funding from the Power Fund and what will happen with the equipment that is purchased with Power Fund dollars? A. The equipment will be permanently housed at BECON.
- Q. Can you describe the “selective metal catalysts?” A. Metal particles adhere to catalysts to produce higher ethanol yield, nano-technology in the ethanol field.
- Q. What is the basis for table 2, different cases for biomass for ethanol? A. Biomass at \$50 a ton is comparable to corn at \$3 a bushel.
- Q. If the project is successful what is the next step? A. The second step would be to license the combustion technology. The platform would help attract more dollars from the Federal government, as well as other businesses.
- Q. Assuming a normal timeline, when in the best case, would there be a commercial plant utilizing this technology? A. The commercial plant could potentially be producing ethanol in 4-5 years. But, the burner execution could move forward very quickly. This is the first phase of the catalyst, but in two years the catalyst could be produced at a much larger scale.
- Q. Why is the group using discarded seed corn as opposed to other biomass feedstock? A. At this point there is the availability of free feedstock from Pioneer, and to properly measure results there needs to be a consistent feedstock. Corn also has a higher NOx, so minimizing the NOx will be beneficial for all cellulosic materials. Corn stover was also used in a similar application last year.
- Q. What will be learned that is not already known? A. There is no burner developed to mitigate the NOx in feedstocks.
- Q. There is a lot of research already being done in this area, has a patent search been done? A. Yes, because ISURF has given the project an ID number, but not all arenas towards commercialization been investigated. There are very confident in the catalyst and the burner.
- Q. What is the energy balance for this proposal, can you gasify manure? Yes, cattle and chicken manure. Conventional ethanol plants can reduce input energy costs by 1/3.
- There has been very little funding from the DOE for thermo chemical advancements.

There is the recommendation that this proposal goes the full board:

Yes if: Codel, Crosbie, Higby, Hubbell, Gebhart

Recusal: John Brighton

1. There is a question about the energy balance for this project.
2. There is the need to have a technical review.
3. There is concern if the state purchases the equipment who will be the rightful owner of the equipment.
4. The IP and the royalty sharing needs to get addressed.
5. How does this proposal fit in with other techniques that are need
6. Check with RMT in Wisconsin about NOx burner.

Pre-Application 1082- Climate Change Education and Empowering Citizens through Positive Actions-

this proposal was submitted through UNI with participation with UOI and ISU. The proposal seeks to

- The advantage of this proposal is that it works with extension and can reach almost every county in Iowa.
- The Principals are well established and have good reputations in their areas.
- Is there a way to coordinate with groups that are proposing similar projects?
- The Power Fund Board created and Energy Education and Energy Efficiency Ad Hoc Committee at the last Board meeting to see how best energy education and efficiency can be engaged by the Power Fund.
- There is match coming from the universities, but there is question how the match is coming in.
- This tackles emissions which are a goal for the Power Fund- but there are other groups performing these tasks throughout the state, how will this project be different?
- Have any other states with land grant extensions done something like this to equal the coverage of this proposal, and has that attempt “moved the needle”

- Is this the first of its kind in depth of coverage?
- What is the effectiveness of this sort of approach?
- There was a time in the 80's when Extension was heavily involved with efficiency efforts, but it is not know if there are actual results available for this type of project.
- How much activity is needed to see results, even with the extensive coverage of this proposal?
- Can researchers validate this as something that moves the needle or not?
- Research based approach is good, but it is hard to translate into action, and an essential piece of this project should be to turn it into action, which will "move the needle."
- Using this network with a program that has "moved the needle" could be a good approach.

Yes-

Yes, if- Crosbie

No, but- Hunter, Hubbell

No-Codel, Gebhart

Recusal: John Brighton and Pat Higby

1038: Annual Iowa Energy Poll- Presenter Ron Padavich, UNI

Proposal

- Strategic Marketing Services was established in 1990 and is self supporting- they receive no General Fund dollars
- The group helps business and organizations by collecting and analyzing information they work with a variety of different private and public entities.
- No current broad based accurate information on attitudes, knowledge, beliefs, levels of concern, and behaviors
- There is no mechanism in place to measure changes over time, and the effectiveness of policies and procedures
- National study from last year (Energy Pulse) says that there is a "disconnect between what consumers think and how they use energy," and people do not understand renewable energy.
- In 2008 there would be a baseline study with this proposal about knowledge, attitudes/opinions, levels of concern and behaviors.
- 2009-2010 a separate survey would be done to knowledge gain.
- Here would be a variety of mailings done to obtain information and a report would be completed in January 2009.

Questions

- Q. Would they consult with OEI about the questions? A. Yes, they already have 250 questions developed.
- Q. Did you do the IUB study? A. No
- Q. Is the funding request for all 3 years? A. Yes, there will be a reevaluation over all three years.
- Q. How biased will this study be? A. The mailing and will be followed with phone calls to make sure that there is no biased information.
- Q. What will be the results of the poll? A. The study will create a pulse of what lowans opinions are on certain energy issues.
- Q. How is this different than the IUB poll? A. This poll will be much more complex, and will poll on a variety of issues, and will be much more accurate on a broad range of issues.
- Q. If the Power Fund didn't exist, would this survey still be done? A. The Power Fund and the OEI needs to know what the public thinks, what could influence public policy, and other business would charge more for this project. Input would be sought from the Iowa Power Fund Board and the Office of Energy Independence.
- Q. Does there need to be a survey of the citizens of Iowa for the Energy Plan, does there need to be an RFP, how was input put in last year? A. There was input received from public outreach meetings across the state.
- There is question as to whether the Board wants a survey or not. This seems to be a quality survey at a good price. It is a good survey for the Power Fund Board if the Power Fund wants a survey.

There is the recommendation that this proposal gets a technical and financial potential review.

Yes, if: Codel, Crosbie, Higby, Hubbell

No, but- Gebhart (would like to see a comparison of other surveys- to see which option was the best with price, scope, and company involved)

Recusal: John Brighton

1120: IRENEW ENERGY EXPO- this is a resubmitted pre-application to expand I-RENEW's annual energy expo.

The following comments were made:

- This seems to be a much more focused pre-application.
- This project would be used to develop DVD's to support energy education throughout the state.
- This is a specific annual event with exhibits that range from technology to corn pellet burners, etc.
- The expo focuses on what can be done at home.
- I-RENEW has done what was requested by the Due Diligence Committee.
- In the precedence established with Iowa State program at \$12,500, the Due Diligence Committee can possibly offer a lesser amount to do a conference sponsorship with a "hands off" approach.

Yes- Brighton, Codel, Hubbell

Yes, if- Crosbie, Gebhart (modified to a smaller number)

No but- none

No- none

Recusal: Pat Higby

1123 Biodiesel Feedstock Facility

The following comments were made:

- There is question if this information would be valuable to the industry and if the information from REG would be beneficial, there is general agreement that REG would be a good company for this research.
- It seems as though REG has done what was asked of them in the resubmitted pre-application pretty toughly.
- There maybe public labs already set up, this is using public money to set up a private lab.
- But, the group is making the research available to the public at no cost.
- There needs to be an expansion of what are the deliverables.
- All of the feedstock research will help to develop pricing models for the mix of feedstock in varied years.
- There is not consistent research being done across the board.

Yes-none

Yes, if- Brighton, Crosbie, Higby, Hubbell

No but-none

No- none

Recusal: Franklin Codel

1124 TPI Wind Blade Advance Manufacturing – this project does not seem to have changed significantly from the original submission.

The following comments were made:

- There does not seem to be many environmental benefits.
- This seems to only help this business and not the industry as a whole.
- DED is at the limit for assistance to TPI.
- There is a trade-off between manufacturing labor costs, and transport costs and TPI is looking for advanced system to develop a better process.
- There is a question on whether or not TPI would do this research without us.
- It is surprising that GE Six Sigma would not step-in to improve their supply chain.

Yes-none

Yes, if- Higby

No but- Codel,

No- Crosbie, Hubbell, Gebhart

Recusal: John Brighton

1110 Amazing Energy Innovative Technology

The following comments were made:

- This project came with an independent assessment. Dr. McCall says that this technology does not have any “fatal flaws.”
- It was not commented on in the proposal if this was a new or existing technology. It seems that this is well established dry mill technology.
- This technology has been used by Broin, and MOR.
- There are a number of problems with this proposal. The plant is a 50 million gallon plant which is on the small side for this technology.
- There is a “supercritical component” owned by Crown who has said that is not proven to work in ethanol industry.
- There is not enough fiber in a kernel to do what the proposal claims. The theoretical maximum is a 5% improvement.
- The company would need to show that they would do something new and different, and revise their assertion of 15 million gallons.
- How is the Denison plant different than the Broin facility in Coon Rapids and other plants around the industry?
- It seems as though this proposal just seeks to test the equipment, to which there already seems to be answers.
- The question how is the information obtained from this proposal new, how is this project different, and how will it impact the industry?
- A white paper approach of the entire industry and ddgs could be helpful for the Board moving forward.

Yes-none

Yes, if- Brighton, Crosbie, Higby

No but-Codel, Gebhart, Hubbell

No- none

****The applicant will be asked for a supplement answering the questions of the Due Diligence Committee.****

1111 Natures Furnace – this proposal seeks to aide in the development an alternative use of waste streams that tend to pollute water supply.

The following comments were made:

- What is the emissions profile of the combustion?
- There does not seem to be any developments by the company. There seems to be a business plan but not a product.
- There is evidence that this program has worked in Ireland, but there would seem to be different feedstocks in Iowa.
- At the commercialization stage there could be Power Fund dollars, but not at the pilot phase.
- There seems to be another organization that is doing all the construction work.
- There may be some dollars in the Department of Economic Development Demonstration Fund.

Yes-none

Yes, if- none

No but-Higby

No- Brighton, Codel, Crosbie, Hubbell

1113 Sryia Iowa Biorefinery-

The following comments were made:

- The applicant has addressed some of the earlier concerns of the Due Diligence Committee
- The group is prepared to deal with the licensing.
- There are some good groups that are behind this proposal.
- If there is an IRR of 68% it seems like there would be heavy investment from private capitol firms.
- The proposal deals with supercritical technology.
- There are a lot of acronyms in the proposal without definitions.

Yes-none

Yes, if- none

No but- Higby

No- Brighton, Codel, Crosbie, Hubbell

1114 Prime GEO Energy #1-This project will produce alternative energy by the use of deep well geothermal power generation.

The following comments were made:

- This seems to be a feasibility study
- There does not seem to be a lot of information about how the total amounts were arrived at.
- There is only \$3 million of equity in a \$33 million proposal.
- How does the applicant know that Iowa is better for drilling than any other place in the nation?
Where is the information from?

Tabled: until the information is gathered.

****The applicant will be asked for a supplement answering the questions of the Due Diligence Committee.****

1117 Ames Transit-this proposal seeks to offer free public transit to all individuals in Ames.

The following comments were made:

- The fact that fares are free does not motivate bus ridership there needs to be a holistic approach to public transportation.
- There needs to be an integrated approach.

Yes-none

Yes, if- none

No but- none

No- Codel, Crosbie, Higby, Hubbell

Recusal- Brighton

1116 Green and Main –this project would be a case study for Iowa's first LEED Platinum rehabbed building.

The following comments were made:

- There is an increased amount of partnership and educational components as opposed to the previous pre-application.
- Indigo Dawn would build the project and bring in various groups across Iowa to educate about how the building was rehabbed.
- This proposal includes a dedicated community room.
- There seems to be a lot of support from many groups.
- How will precedence be set once one building is funded?
- More information about the educational aspects would be needed.
- There could be several buildings showcased all over the state, there could be comfort in funding 3 or 4 strategically placed buildings across the state in various types of buildings.

- Without the Power Fund money is this project sustainable?
- This is a classic example of a community based project which is could be replicated at a lesser amount.
- If there will be market transformation there needs to be a case for the money.
- There needs to be a very precise budget included in a full application.

Yes-none

Yes, if- Brighton, Codel, Crosbie, Higby, Hubbell

No but- none

No- none

1118 Arbor Valley Lake-

The following comments were made:

- The proposal doesn't seem to be very cost appropriate.
- This is something that Consumers Energy has already done.
- There are some issues in the size of homes and the energy used,
- There would need to be more development than just for 5 homeowners.
- This is not new technology.

Yes-none

Yes, if- none

No but- none

No- Brighton, Codel, Crosbie, Higby, Hubbell

1119 Mount Vernon Community School District-

The following comments were made:

- This school district is seeking to upgrade solar technology at the school district.
- There doesn't seem to be a whole lot of education tied to this proposal.

Yes-none

Yes, if- none

No but- none

No- Brighton, Codel, Crosbie, Higby, Hubbell

1121 Freedom Fertilizer-

The following comments were made:

- This proposal would like to develop a feasibility plan to produce ammonia from wind power to power automobiles.
- Power Fund would be used to fund a feasibility study, travel, and administrative costs, but not to do actual research.
- This could be reviewed once there is a business plan.
- They may be on to something, but there needs to be more structure in place.

Yes-none

Yes, if- Higby

No but-none

No- Brighton, Codel, Crosbie, Hubbell

Other Business

- The Due Diligence Committee has been asked to review a frequently asked questions document that was created by OEI staff for the website, the committee is asked to submit comments to staff.
- There needs to be some consideration to deal with the compliance with the Power Fund Board and OEI staff.

Adjournment:

There being no further business to discuss at this time, the meeting adjourned at about 6:50 P.M. It was indicated the next meeting would be Wednesday, May 28th TBD.

Roya Stanley, Committee Chair

Brian Crowe, Recording Secretary

Date